CLAIMS

What I claim is:

1. A non-replicating vector comprising:

a nucleotide sequence encoding a serine-threonine kinase (STK) or a fragment of said STK that generates a STK-specific immune response, and

a promoter sequence operatively coupled to said nucleotide sequence for expression of said STK in a host to which the vector is administered.

2. The vector of claim 1 wherein said promoter sequence is a cytomegalovirus promoter.

3. The vector of claim 2 wherein the cytomegalovirus promoter is contained in the human cytomegalovirus major immediate-early promoter-enhancer region.

4. The vector of claim 1 which is a plasmid vector.

5. The vector of claim 1 wherein said nucleotide sequence has SEQ ID No: 1.

6. The vector of claim 1 wherein said strain of *Chlamydia* is a strain producing chlamydial infections of the lung.

7. The vector of claim 1 wherein said strain of *Chlamydia* is a strain of *Chlamydia trachomatis*.

8. The vector of claim 7 wherein said non-replicating vector comprises plasmid pcDNA3 containing said promoter sequence and into which said nucleotide sequence is inserted in operative relation to said promoter sequence.

9. The vector of claim 8 wherein said nucleotide sequence has SEQ ID No: 1.

10. An immunogenic composition for *in vivo* administration to a host for the generation in the host of a protective immune response to a serine-thresnine kinase (STK) of a strain of *Chlamydia*, comprising a non-replicating vector as claimed in claim 1, and a pharmaceutically-acceptable carrier therefor.

11. A method of immunizing a host against disease caused by infection with a strain of *Chlamydia*, which comprises administering to said host an effective amount of a non-replicating vector as claimed in claim 1.

12. A method of using a gene encoding a serine-threonine kinase (STK) of a strain of *Chlamydia* or a fragment of said STK that generates a STK-specific immune response, to produce an immune response in a host, which comprises:

isolating said gene,

operatively linking said gene to at least one control sequence to produce a non-replicating vector, said control sequence directing expression of said STK or fragment thereof when introduced into a host to produce an immune response to said STK or fragment thereof, and

introducing said vector into a host.

13. The method of claim 12 wherein said control sequence is a cytomegalovirus promoter.

14. The method of claim 13 wherein the cytomegalovirus promoter is contained in the human cytomegalovirus major immediate-early promoter-enhancer region.

15. The method of claim 12 wherein said non-replicating vector is a plasmid vector.

16. The method of claim 12 wherein said nucleotide sequence has SEQ ID No: 1.

17. The method of claim 12 wherein said strain of *Chlamydia* is a strain producing chlamydial infections of the lung.

18. The method of claim 12 wherein said strain of *Chlamydia* is a strain of *Chlamydia trachomatis*.

19. The method of claim 12 wherein said non-replicating vector comprises plasmid pcDNA3 containing said control sequence into which said gene encoding STK is inserted in operative relation to said control sequence.

20. The method of claim 19 wherein said nucleotide sequence has SEQ ID No: 1.

21. The method of claim 12 wherein said host is a human host.

22. A method of producing a vaccine for protection of a host against disease caused by infection with a strain of *Chlamydia*, which comprises:

isolating a nucleotide sequence encoding a serine-threonine kinase (STK) of a strain of *Chlamydia* or a fragment of said STK that generates a STK-specific immune response,

operatively linking said nucleotide sequence to at least one control sequence to produce a non-replicating vector, the control sequence directing expression of said STK or fragment thereof when introduced to a host to produce an immune response to said STK or fragment thereof, and

formulating said vector as a vaccine for *in vivo* administration to a host.

23. A vaccine produced by a method as claimed in claim 22.